Interest of peripheral nerve catheters after arthrolysis of the elbow

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Introduction.– Pain and swelling limit postoperative mobilization and should be treated. The use of a peri brachial nerve block catheter is justified in many cases, especially for moderate to severe postoperative pain in the context of a multimodal analgesia. The objective of this work was to show the usefulness of nerve blocks after arthroscopic elbow surgery on functional outcomes after rehabilitation.

Patients and methods.– Descriptive study, cross sectional and prospective (2004–2011) involving 31 arthroscopic elbow procedures followed by PRM for rehabilitation after surgery:

– group 1: six patients (with catheter);
– group 2: 25 patients (without catheter).

Evaluation methods:

– VAS;
– joint range of motion (ROM);
– functional evaluation: eating, personal care, writing, DASH.

Results.– The average age of patients was: 24 years (10–40), with a male predominance (77% men), the two main indications for arthrolysis were post traumatic stiffness and periosteoarthropathy.

Group 1:

– the VAS has increased from 7.5 to 4.1
– ROM: 42° gain in flexion-extension and 28° pronation suppination

Group 2:

– VAS increased from 6.6 to 4.8;
– ROM: 35.8° gain in flexion-extension and 19° pronation suppination.

Discussion.– After arthrolysis elbow, axillary analgesia by catheter technique is safe and effective. There are three ways for technical maintenance of analgesia via the peripheral nerve catheter: iterative injection boluses, continuous infusion and patient controlled administration. Today, the technique of choice is patient-controlled analgesia (PCA) using catheter-administrated ropivacaine. Ropivacaine is the most widely used local anaesthetic because it provides excellent analgesia and motor block with moderately high safety in the administration protocols. Analgesia can enhance rehabilitation, but the absence of a pain alarm requires greater vigilance for signs of inflammation detrimental to functional outcome.

Conclusion.– Peripheral nerve catheters have resolved many problems of acute pain in the framework of a multimodal analgesia, and this in a larger program of postoperative rehabilitation, allowing early and optimal rehabilitation treatment.

Further reading

Acta Orthop The Turkish traumatol 2010; 44 (2).